THE MARINE RECORD

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PRIZES FOR PASSENGER BOAT OFFICERS.

As announced last week in our Chicago letter, the management of the Goodrich Transportation Co. has been awarding prizes to the officers of its boats according to rules fixed for the contest early last season. The circular containing these rules was issued April 15, 1895, and the contest lasted through the season of navigation. The judges and inspectors were selected from the directors of the company, but they were also men who had had practical experience in the varions departments in which they passed judgment. The Atlanta, judging from the distribution of prizes, seems to have the crack officers.

Captain Gallagher, of the Indiana, won the master's prize of $150. The requirements were that the steamer should be in the best condition at the close of the season, and that his crew should have been most efficient in all departments. Personal neatness and cleanliness of the entire crew, all damage done to or by the vessel, all loss and damage to cargo, treatment of passengers, and everything pertaining to good discipline, as provided for in the rules of the company, was the test in award of the prize.

W. H. Jerome, of the Atlanta, won the chief engineer's prize, $100, for the best care of all machinery, economy in fitting out expenses and repair bills, and in fuel and oil. In awarding this prize the number of miles made by the boat, and also the speed required by schedule time, were considered; also the class of the engine and the nature of the boilers.

W. A. Flint, of the Atlanta, won the prize of the second engineers, $50, the requirements being essentially the same as for the chief.

The prize for purser, $100, was carried off by J. M. Fifield, of the Atlanta. In this contest the condition of books, reports and other work in his department were considered. All shortages and damage to freight, and all errors, erasures, blots, etc., on books or reports, together with any reports from passengers of discourteous treatment from him or others while on the boat, were to count against him.

T. A. Egan, of the Indiana, and H. J. McCarthy, of the City of Racine, had an even number of marks for the stewards' prize of $75, which was accordingly divided between them. The requirement in this case was that he should keep his boat and crew in the very best manner possible at the lowest expense, and should have the fewest complaints of treatment toward passengers reported against him.

A prize of $75 is to be awarded to the first officer who has kept his department in the best condition in every respect. Breakage of line, damage to and shortage in cargo, and manner of handling cargo, were to be considered. The contest for this prize was so close that it has not yet been decided. Neither has the prize of $50 for the second officer to be awarded under the same conditions. These names will be announced later. The company has had every reason to congratulate itself upon the success of its experiment, and it is not unlikely that it will be repeated next season.

MANAGEMENT OF THE ROCKEFELLER FLEET.

Mr. L. M. Bower, of New York, is expected here in Cleveland daily, and will open an office in the Wade building, from which he will look after the interests of the Rockefeller fleet, including the ships now building, and the Pittsburg and Washburn. He will have an assistant in the person of some man capable of taking the position of shore captain. Capt. John B. Hall, of the Buffalo brokerage firm of A. Clark & Co., and Capt. P. L. Millen, recently appointed to command the wrecker Favorite, are both prominently mentioned for the place. Capt. C. B. Mallory has been performing the duties temporarily in connection with his work for Pickands, Mather & Co.

KNOW A VESSEL WHEN THEY SEE HER.

THE MARINE RECORD is pleased to be able to present to its readers a picture of ten of the best posted men on the subject of vessels in the lake trade. They represent the expert inspectors and wrecking masters of a dozen general agencies representing the vast marine underwriting interests of the world. On account of their familiarity with the construction and requirements of all classes of tonnage, they were called together this winter to classify and place a valuation upon the lake craft for the compilation of the Inland Lloyds' Vessel Register, which is now in the hands of the printers. After finishing their work they repaired to J. H. Ryder's photograph gallery, and the result produced is something for even that eminent artist to be proud of. It is one of the most perfect group pictures ever taken. Each man shown in the group has a host of friends on the Great Lakes who will be glad to see him in such good company.

WHEAT AT THE HEAD OF THE LAKES.

Wheat in store at the head of Lake Superior is apportioned among the various terminal elevator lines as follows:

Belt Line	1,275,596
Consolidated	3,416,415
Globe	4,163,872
Great Northern	810,807
Superior Terminal	1,416,878
Consolidated B	284,628
Consolidated H	81,616
Aggregate	11,449,812
Wheat in store at Minneapolis	20,058,238

FREIGHTS STILL LIFELESS.

A meeting of such ore men as were in the city was held in Cleveland Wednesday. The general situation was discussed, but the concensus of opinion was that the state of neither the iron nor the vessel market warranted any haste in either chartering or making sales of ore. Coal sales are still backward, and if any chartering has qeen done the transactions have beeu strictly secret.

Among the interesting exhibits at the fourth annual yachting exhibition, now being held at the Westminster Aquarium, London, is a glass-incased model of the steam yacht now being built by A. & J. Inglis for Eugene Higgins, of New York. It is a high-speed, twin-screw yacht. The dimensions are length over all, 255 feet; length on lower water line, 240 feet; breadth 32 feet 6 inches; depth, moulded, 18 feet 3 inches; draught, 14 feet 6 inches; tonnage, yacht measurement, 1,166 tons. Coal bunker capacity, 350 tons. She will have an open promenade awning deck 150 feet long.

The Canadian Trade Review says that a movement is afoot in Wallaceburg to place a passenger and freight steamer on the route between that port and Montreal, calling at intermediate points, such as Windsor, Hamilton, Toronto, Belleville and Kingston. Responsible parties are promoting the scheme, which is believed to be the outcome of high freight rates on the railways.

The steamer Shenango No. 1 was, at last reports, still fast in the ice fifteen miles off the American shore below Erie. The crew have secured provisions and the boat is all right, save for disabled steering gear.

CHANGES IN INLAND LLOYDS RULES.

The special meeting held by the wrecking masters of the various general insurance agents who are members of the Inland Lloyds, for the classification and valuation of vessels for the coming season, was adjourned last week. The valuations of the steel tonnage were raised somewhat, with the exception of the vessels turned out last year. There were several changes made in the rules, the most important of which was the alteration of Section 6. This section formerly read as follows:

Sec. 6. New vessels not equal to the requirements for A1, but coming within 5 per cent, and all vessels regularly lapsing from that grade shall be classed A1 ½. When this is not the original grade, its term shall be three years, providing there is no rot nor decay in frame, ceiling, or any other part.

As amended, it reads as follows:

Sec. 6. New vessels not equal to the requirements of A1, but coming within 5 per cent. and all vessels regularly lapsing from that grade shall be classed A1 ½. When this is not the original grade, its term shall be five years, providing that there is no rot nor decay in frame, ceiling, or any other part, and vessel retains form sheer. Vessels may obtain three years extension of this grade if thoroughly repaired in dry-dock, under inspection as required in Section 14.

This serves a purpose which has long been advocated in many quarters, viz., the recognition of the fact that a vessel is well kept up by her owner, and the discrimination in her favor as against those boats to whieh such careful attention is not paid:

Section 12, which provides for a classification, "when vessels are manifestly too unsound, imperfect impaired, weak, or worn out to express confidence in, although if carefully navigated, they may carry moderate cargoes of wood or lumber" was eliminated from the rules. It has been a dead letter for several seasons. In its place the following rule was inserted:

Sec. 12. Inspection of vessels for classification in Inland Lloyds Register should be made when the vessel is fully fitted out and in commission.

Section 17 was amended by the insertion of the words printed in italics:

Sec. 17. All vessels shall have anchors, chains, and hawsers, as specified in the table following. The length of each chain for vessels exceeding 400 tons shall be 90 fathoms, *and for all tow barges of* 1,000 *tons and upwards the length of each chain shall be* 135 *fathoms.*

THE LAKE ERIE PASSENGER LINES

The Detroit & Cleveland Steam Navigation Co., hope to be able to open navigation about the 15th inst. The ice will be closely watched, and if conditions are favorable, the start will be made on the day.

There has been a good deal of guess work indulged in as to who shall have the command of the steamer City of Cleveland if Capt. Dugald McLachlan is unable to take charge in the spring. The RECORD believes it has good ground for venturing the prediction that Capt. Archie McLachlan, who has for a number of years been pilot with the line, will be given the command. Capt. Archie could take the steamer over the line blindfolded, except for seeing the ranges, and his quiet, unassuming disposition hides a great deal of ability and true manliness. Capt. Archie is known to most of the regular patrons of the line, who would be exceedingly glad to hear of his certainly merited promotion.

The Cleveland & Buffalo Transit Co. are figuring on beginning operatious about April 1. The officers of the boats are getting ready, and preparing to fit out. Cashier E. D. Shurmer, of the company's general offices, and A. D. McLachlan, purser of the steamer City of Buffalo, have just returned from a trip to New York, Galveston, and the City of Mexico, returning via St. Louis. Mr. Lewis Haydorn has been promoted to the position of freight soliciter for the line. The inaugural trip of the City of Buffalo, will be a memorable event.

LAKE CARRIERS' ASSOCIATION.

To consider and take action upon all general questions relating to the navigation and carrying business of the Great Lakes, maintain necessary shipping offices and in general to protect the common interest of Lake Carriers, and improve the character of the service rendered to the public.

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W. S. Mack,	Cleveland.	W. Bullard,	Buffalo.
David C. Carter,	Detroit.		

FLOTSAM AND JETSAM.

The engines of the Centurion, Lyon and A. P. Wright are already being fitted out at Buffalo.

A new residence is being built for the assistant superintendent of the Sturgeon Bay Canal.

Ezra Nicholson has sold one-eighth of the steamer Horace A. Tuttle to Philip J. Minch.

Capt. Howard T. Shaw will remain ashore this season and manage the Eddy-Shaw fleet.

The steamer Pridgeon has been taken out of the Lake Erie line and chartered to the Soo line.

Senator Cullom's bill appropriating $400,000 for two more lake revenue cutters has passed the Senate.

The Sainte Marie, at the Straits, carried 3944 cars in December, as compared with 1700 in December 1894.

The monitor Monadnock was placed in commission at Mare Island Navy Yard on Feb. 22. Her keel was laid 21 years ago.

Sturgeon Bay citizens raised in one day $5,000 of the $7,000 bonus necessary to secure the location of the Rieboldt & Wolter shipyard.

Col. Wm. Ludlow, who has been visiting the Kiel canal on his tour of inquiry, has gone to Berlin by request of Emperor William.

Mr. Charles L. Colby, of New York, died at Newton, Mass., last week, aged 60 years. He was a director in the American Steel Barge Co.

The remainder of the cars which were lost off the Ann Arbor in January have been found near the foot of Lake Michigan, cast upon an island, with the trucks gone.

The loss of the ill-fated Lake Michigan steamer about a year ago has been commemorated by the establishment of a postoffice in Allegan county Mich., by the name of Chicora.

The work of stripping the Antoine mine, near Iron Mountain, Mich., will begin soon. There is at least one million tons in sight above the water level, of excellent quality ore.

The location of a shipyard at Sturgeon Bay has already started the farmers of that region to getting out tamarack roots, which are very largely used for knees in wooden shipbuilding.

Determined opposition is being made by vesselmen to proposed bridges across lake tributaries at Ashtabula, Toledo, and Lorain, all of which are pronounced obstructions to navigation.

Chief Willis Moore, of the Weather Bureau, has introduced the chalk plate system of making weather maps into his service, and the maps made at Cleveland, Chicago, Buffalo, etc., will soon be printed by that process, which is analogous to that used by the daily press in making their illustrations, and which has no equal as a time saver.

The Indiana legislature has addressed a memorial to Congress asking an appropriation for a survey for a ship canal from the south shore of Lake Michigan to the Wabash River near Logansport.

Representative Towne, of Duluth, points out that an objectionable bridge at Detroit would be encouraging to the project to construct a canal between Lake St. Clair and the east side of Point Pelee.

The rehearsing of the case of Captains Grasser, of the Cayuga, and Wilson, of the Hurd, which were revoked because of the collision last summer, has resulted in the sustaining of the local inspector's decision.

During 1895 the outpuf of the saw mills on the Lake Huron shore, exclusive of Cheboygan, was 229,545,308 feet of lumber and 114.444,950 shingles. The maximum production of lumber was 62,000,000 feet in 1888.

Capt. Jay Hursley will operate the steamer City of Grand Rapids in the passenger and package freight trade between Sault Ste. Marie and Marquette, making stops at Grand Marais, Pictured Rocks and Munising.

Robert McMillan, of Detroit, has contracted with the government to supply employes of lighthouses and light vessels in the tenth district at $59.44 per year per man on vessels and $27.90 per year per man at stations.

Capt. Jex, of Toledo, has been awarded the contract by the United States government for getting the schooner Mary out of the way. She was sunk last fall in the St. Clair River at Southeast Bend through collision.

Capt. William Dulac, of Mt. Clemens, Mich., has bought the barge Jere Godfrey, $14,000 being reported as the purchase price, and she will tow with the Lozen, behind the Street. He has also bought a controlling interest in the Norwalk.

Racine city officials have decided to accept the offer made by the federal government to widen the river from the harbor piers to a point west of the life-saving station, and to do the necessary dredging and docking provided the city will donate the land for the work.

United States engineers and their assistants, about 25 men in all, are sounding the bottom in Detroit River between Ballard's Reef and Limekiln Crossing, with a view to locating obstructions. If the river continues frozen the work will be continued as far down as Bar Point, Lake Erie.

Chief of Engineers Craighill estimates the cost of a survey inquiring into lake levels at $150,000 to $175,000. He says a thorough investigation of the physics and hydraulics of the lakes and questions relating to the feasibility of constructing dams at outlets, should extend over sufficient time to eliminate accidental fluctuations, and cover all states, and may have to be continued several years.

BOILERS FOR NEW YACHTS.

The boiler shops at Charles L. Seabury & Co.'s works, at Nyack-on-Hudson, are kept very busy getting out Seabury safety water-tube boilers for the new yachts under way there. They are also building boilers for the following yachts: Mr. R. Lincoln Lippitt's yacht Velthra, of Providence, R. I.; Mr. Jesse Metcalf's yacht Silva, of Providence, R. I.; Mr. Robert Goelet's yacht Beatrice, of Newport, R. I.; steam yacht Capt. Visgar, of Alexandria Bay, N. Y.; new steam yacht Willa Walla, now building at Poughkeepsle; new steam launch building for W. H. Roberts, of Bar Harbor, Me.

The yacht Marjencha has also been fitted with a new Seabury safety water-tube boiler. There are other yachts that will be fitted with Seabury boilers this season.

The new 140-foot steam yacht Kanawha and the 135-foot steam yacht Hiawatha, also the 85-foot twin-screw yacht Mayita are progressing very nicely at Seabury's yards. Capt. Frank Smith is in charge of the Hiawatha, and Capt. William A. Miller is in charge of the Kanawha.

The advertiser who sticks to printer's ink in dull months will find trade sticking to him in better times.—Iron Trade Review.

THE MARINE RECOBD is the repository for all engineering and nautical publications. Hydrographic charts always on hand.

APPOINTMENTS FOR NEXT SEASON.

The following appointments of masters and engineers for the season of 1896, have been announced by owners:

STEAMER.	MASTER.	ENGINEER.
Algonquin, (Br.)	McMaugh, James	Ellis, James H.
Aztec	Baby, James W.	Horton, Amos
Bessie	Boshaw, Oliver	Fortier, John
Bielman, C. F.	Stewart, A. E.	Lacy, Robert
Boyce, M. H.	McGregor, W. F.	Dereno, Clark
Buckley, Ed. H.	Gnewuch, Charles	Winkler, Richard
Buell, F. R.	Woodgrift, C. W.	Diehl, John
Canisteo	Lynn, W. J.	Boynton, W. G.
City of Bangor	Cavers, Wm	Tilton, George M.
Coralia	Cummings, Wm.	Haig, Andrew
Curtis, C. F.	Cunningham, Jas	Cunningham, Wm.
Eddy, Selwyn	Coleman, J. H.	Cowell, S. G.
Fletcher, F. W.	Moore, H. D.	Brake, Wiiliam
Flint, O. T.	Conor, R. O.	Hanlon, W. H.
Gault, J. C.	Lewis, C. H.	Kohlburne, Joseph
Gould, George	Cottrell, Wm. M.	Butler, George
Hall, S. C.	Bennett, Henry	Richards, L.
Hattie,	Stewart, N. L.	Morrison, I.
Hebard, Charles	Parsons, James	Schumacher, Wm.
Josephine,	Isbister, J. W.	Durkin, T.
Lockwood, J. C.	Wilson, Wm. H.	Weeks, L. D.
McGregor, M. A.	McGregor, A. E.	Smith, A.
Manchester,	Kelley, Timothy	Grant, James
Manhattan,	Lofin, H. F.	Patterson, W. R
Maricopa,	Mallory, C. B.	Arnold, A.
Maryland,	Yax, J. E.	Conley, M.
Massachusetts,	Anderson, P. A.	Ahem, Wm.
Merrimac,	Smith, Matt	Allison, R.
Minnesota,	Sniffin, B.	Pinkham, W. H.
Monarch (Br.)	Robertson, E.	McKean, E. W.
Monteagle	Griffin, Wm.	Jamieson, Joseph
Nipigon,	July, Edward	Francomb, Chas.
Norseman,	Stewart, John	Leitch, Thomas
North Star,	Thorne, Wm.	Pike, W. T.
North Wind,	Waite, Delos	Jackman, T W.
Northern King,	Murch, W. B.	O'Mara, John A.
Northern Light,	Haberer, M. J.	Harringer, F.
Northern Queen,	Smith, E. M.	Stewart, A. T.
Northern Wave,	Niland, Martin	Potts, Fred
Norwalk,	Matteson, E. F.	Wilson, A. J.
Orr, Arthur,	Massey, John	
Orr, George,	Montague, C. Z.	Smith, William
Owen, John,	Thorpe, E. F.	
Parnell, C. S.	Griffin, P.	Wilson, George
Penobscot,	Smades, Edward	Jenkins, Evans
Pope, E. C.	Smith, John H.	Annet, Henry
Presley, George,	Mullen, J. D.	Steadman, Charles
Preston,	Harlow, William	
Ralph, P. J.	Leisk, Henry	Bolton, W. J.
Reynolds, S. C.	Root, Henry	Mullen, J. H.
Rosedale (Br)	Ewart, James	Childs, Richard
Sage, Russell,	Hemyl, T. C.	Busterd, John
Say When,	Todd, J. D.	Schurman, Chas.
Shepherd, Sakie,	Ferguson, George	Elsey, John
Siberia,	Morse, W. W.	
Stafford, W. R.	Roach, Wm.	Francomb, J. A.
Starke, C. H.	Crosby, Wm.	Lacy, John
Street, C. A.	Gallino, A. P.	Lamb, C. F.
Thompson, A. D.	Hoag, William	
Toledo,	Burns, George	Jubimille, C.
Toltec,	Taylor, James	Pierce, C. G.
Unique,	Robertson, John	Purvis, James G.
United Empire Br	McNab, ——	Brisbane, Samuel
Vance, F. L.	Marquette, E. B.	Wilcox, Charles
Viking,	Stewart, Albert	Leitch, Robert
Weston, A.	Hyde, M.	Peltier, C. S.
Wetmore, W. L.	Rice, Frank	Martin, Charles
Wilbur, E. P.	McFarlane, P.	

SCHOONER.	MASTER.
Aloha	Elliott, William
Black Diamond	Harlow, Wm. Jr.
Brunette	Pitcher, F. A.
Corry, Mike	Sheehan, James
Eleanor	Dubay, Frank
Elvina	Campau, William
Fassett, T. S.	Renders, Albert
Flint, Sam	Stephens, Thomas
Francomb, Jno. A.	Christensen. A.
Fulton	Lafarge, Frank
Gifford, F. W.	Kohnert, E. G.
Godfrey, Jere	Lozen, J. B.
Golden Rule	Recor, C. W.
Harold	Leisk, Thomas
Holland, N. C.	Keischgens, Peter
Jenette	Dubay, William
Koal-Kabin	Harlow, Frank
Lozen, J. B.	Moore, Edward
McWilliams, Ed.	Blair, Nelson
Mason, Nellie	Hanson, Charles
Massasoit	Stalker, Andrew
Metacomet	Shields, W. L.
Michigan	Cadotte, F. J.
Minch	Kaufman, W. M.
Miztec	Shackett, H. S.
Moore, W. K.	Warwick. Bert
Parker, T. L.	Smith, William
Peterson, A. M.	Bough, Charles
Pomeroy, S. B.	Germain, James
Porter	McDonald, W.

We will consider it a favor if we are promptly advised of any error, in spelling or otherwise.

REPORT OF CANADIAN MARINE DEPARTMENT.

CANADA'S MERCHANT FLEET.

THE RECORD is just in receipt of the annual report of Hon. William Smith, Deputy Minister of Marine and Fisheries, upon the transactions of the marine branch of the department for the fiscal year ended June 30, 1895, with an account of a portion of the business up to December 5, 1895, the date of concluding the report. The report says: "The returns from the collectors of customs are made up to December 31, of each year, as required by law. The publication of this report at the present date precludes the possibility of giving the tonnage for 1895. The total number of vessels remaining on the register books of the Dominion, Dec. 31, 1894, including old ann new vessels, steamers and barges, was 7,245, measuring 869,264 register tonnage, being a decrease in the tonnage of 42,915 tons as compared with 1893. The number of steamers on the registry books on the same date was 1,640, with a gross tonnage of 240,906. Assuming the average value to be $30 per ton, the value of the registered tonnage of Canada on December 31, 1894, would be $26,088,720. The number of new vessels built and registered in the Dominion of Canada during the last year was 326, measuring 21,243 tons. Estimating the value of new tonnage at $45 per ton, this gives a total value of $955,935 for new vessels.

The amount received during the fiscal year for account of tonnage due, inspection of steamboats and tificate to engineers was $24,630.56 The expenditures for the year amounted to $26,385 88, an excess over receipts of $1,755.32.

METEOROLOGICAL SERVICE.

Owing to the death of Mr. Carpmell, in October, 1894, the position of Director of the Meteorological Service and Magnet Observatory became vacant. Mr. R. F. Stupart, who had been in the service for a number of years and was next in rank, was promoted to the position at a salary of $1,600 per annum. Mr. Stupart, in his report, states that the usefulness of the service has been increased in several directions. In addition to the publication of weather forecasts furnished to the leading newspapers of the Dominion, besides being posted at about 1,500 telegraph offices in Manitoba, Ontario, Quebec, and the Maritime Provinces, a bulletin has been telegraphed each morning at 10:15 to harbor masters and other suitable persons on the lakes and maritime provinces. The bulletins have proven very useful, and are now posted in 28 different ports. Seafaring men and fishermen appreciate the forecasts, and are governed by them to a large extent when storms are predicted. The demand from persons in Toronto and at a distance of special forecasts continue to increase, and warnings of approaching storms are issued to railways. Over 800 copies of the monthly Weather Review are distributed, and since Jannaiy, 1895, 400 copies of a weather chart have been issued monthly.

HYDROGRAPHIC SURVEY OF LAKE ERIE.

Mr. W. J. Stewart, of the steamer Bayfield, makes the following report of the hydrographic survey of Lake Erie, under date of Nov. 5, 1895:

The winter of 1894-5 was spent by my first assistant, Mr. F. Anderson, and myself in plotting the work for the previous season, and in preparing the fair chart of Nottawasaga Bay for the engraver. This sheet will not be issued separately, but will be contained in the new general chart of Georgian Bay, which should be at hand before the next opening of navigation.

On May 1, I left Owen Sound and proceeded to Lake Erie, arriving at Port Pelee on Saturday, the 4th In Lake St. Clair I spent half a day sounding around the "dump" from the dredging for the new United States Government channel and examined a channel to the southward of same, as complaints had been made that the dump seriously interfered with local vessels trading between Chatham, Ont., and Windsor. I found that a good channel existed south of the dump, with 11 feet of water in it.

At Point Pelee I delayed four days, sounding and making inquiries about new shoals reported to exist there. Could find none, but was informed that several wrecks existed in the locality (whereabouts uncertain) and as the water is not very deep for many miles off the point, it is altogether probable that vessels have at times bumped against these sunken hulls, and the captains have reported shoals.

On the morning of the 8th I reached the point at which I had proposed to start the work proper. This was a high sand bluff about 30 miles west of Long Point. Here in 1876 the United States government has erected one of the main stations of their coast and geodetic survey, and as the Canadian survey should connect, when possible with the United States survey, it was important that a new station should be erected here. I regret to say that some Canadians had removed every reference post. After careful inquiry in the vicinity, I was able to erect a station within a few feet, at least, of the old one. The United States government left similar reference posts for stations at Long Point, near the mouth of Grand River, and at Sugar Loaf Hill (Port Colborne), all of which I was able to find, and in that way make use of their excellent geodetic work, causing us a large saving of money and time, and making our work more accurate than it otherwise could be with a small staff and inferior instruments. In no case can a purely hydrographic survey hope to be as accurate as a special geodetic survey.

I have assumed the positions to be correct as laid down by the United States Coast and Geodetic Survey, and have filled in the shore between by a carefully executed triangulation. I obtained some latitudes during the season, and measured a base line for comparisons, and the agreements were very satisfactory.

After coast lining and fixing the stations for 30 miles west and outside of Long Point, I confined myself to work between the inner bay of Long Point and Port Colborne, and have almost completed that portion. The boat work was carried out from the shore a safe distance outside shoal water—that is an average distance of 2½ miles. Outside this, ship sounding in deeper water was carried out to about 11 nautical miles from shore, or as far as objects could be distinguished on the shore. The area carefully sounded over was 430 square miles; 955 nautical miles were sounded for the boats, and 920 from the vessels. There were 85 nautical miles of shore line traversed.

The shore line of Lake Erie is unlike that of Georgian

CAPT. FRANK FOUNTAIN.

Bay, in that there are no islands, and almost no indentations, but I found the portion examined this season fringed with dangerous reefs, often a long distance, four miles off shore. While known reefs have been accurately charted, one very dangerous new reef has been discovered lying about four miles south of Nanticoke, and covered with only 7½ feet of water.

While the level of the water in Lake Erie has been very low, and a very serious matter for the larger craft now using the lakes, records show it has been as low in previous years—in the winters of 1868, 1872 and 1873. However, at that time the low water was not a serious trouble, both because it occurred in the winter months, and because the vessels then in use were of shallow draft. Most of the large vessels in use now were built during a long period of high water, when, also, the canals and harbors were improved. On these accounts we hear many complaints about the very low water and the chances are that it will be lower than ever during the coming winter. Various causes have been assigned for it; the clearing of lands, and the unusually small rainfalls of late years being, no doubt, the principal causes. There is a theory advanced that the deepening of the outlets to the lakes has contributed to a serious loss of water, but while the inlets to Lake Erie have been deepened in late years no outlets have been altered. On the above theory, the water of Lake Erie should have fallen less than that of any of the other lakes.

While in the neighborhood I made some inquiries about Long Point, and was fortunate enough to see a chart made in 1818 by the late Admiral Bayfield, on which the present Long Point Island is shown as joined to the main land. There is also a map of a large portion of North America by Joseph Bouchette (1895), where the present gap is marked "portage." A chart of Mr. John Harris, R. A. (1839) shows a gap from the main part of Lake Erie to the inner bay of Long Point. This gap was filled up in 1862, but afterwards dredged, while now it is practically closed up again. Other gaps have been made by heavy seas in other parts of Long Point Island, but have been closed again by the Long Point Co., the owners of the land.

Observations, as usual, were conducted with a strong, active compass, and the results will shortly be sent to the Toronto Observatory and the Hydrographer of the Admiralty. During the coming winter my staff will prepare for the engraver copies of the work done, plot such work, and work up notes of various kinds of observations.

On October 23, the Bayfield reached Port Dalhousie, and is laid up there for the winter.

MARINE RECORD Life Savers' Series.

CAPT. FRANK FOUNTAIN.

Although still a very young man, Capt. Frank Fountain, keeper of the Old Chicago Life-Saving Station, has made a very fine record. His parents emigrated in 1856 from Canada to Two Rivers, Wis., where his father engaged in fishing. Here the subject of this sketch was born, May 22, 1867. He attended school until he was 15 years old, after which he assisted his father in fishing. He continued in this calling until 1887, when he entered the life-saving service, spending five years at various stations along both the east and west shores of Lake Michigan. While at the Grand Haven station he rescued two men without assistance, in addition to his regular service with the crew. At Michigan City, Ind., he effected a rescue by jumping off the pier and swimming ashore with a drowning boy 12 years of age.

He joined the Chicago crew under Capt. St. Peter, in 1892, and remained with him until 1894. He was surfman in charge at the Old Chicago station during the memorable storm of May 18, 1894, during which gale the crew made seven trips out into the lake, rescuing 24 people. The crew were capsized on the fourth trip, while on their way to the schooner Myrtle, some of the members remaining in the water an hour before they were picked up. He was appointed keeper of this station on August 31 of that year, and performed some signal service in life-saving during last winter, when the crew were not in commission. On Feb. 17, 1895, he went out alone and took seven boys from an ice floe, on which they were floating toward midlake. On March 3, he took two men, who had lost their boat, from the south breakwater, and rowed them ashore when the wind was blowing 40 miles an hour.

CHANGE OF FIRM.

The firm of Palmer, Cook & Calbick, of Chicago, vessel brokers, has been dissolved. Business will be continund by Capt. J. A. Calbick and Mr. Wm. H. Wood, head bookkeeper of the firm. The new firm will be known as J. A. Calbick & Co.

VISIBLE SUPPLY OF GRAIN.

As compiled for THE MARINE RECORD by George F. Stone, Secretary Chicago Board of Trade, February 29, 1896.

CITIES WHERE STORED.	WHEAT. Bushels.	CORN Bushels.	OATS. Bushels.	RYE. Bushels.	BARLEY Bushels.
Albany	.....	10.000	55.000	.....	4,000
Baltimore	122.000	847 000	70,000	94.000	.....
Boston	571 000	131 000	13 000	.....	.....
Buffalo	1,825.000	91,000	28,000	358.000	783,000
" afloat	259,000	.....	223,000	.....	250,000
Chicago	19.970 000	3 928.000	1.121 000	344,000	17,000
" afloat	281,000	4,574,000	793,000	.....	.....
Cincinnati	16,000	4 000	13.000	18 000	42,000
Detroit	295.000	12.000	13.000	12,000	8,000
" afloat	.....	.....	.....	.....	.....
Duluth and Superior	11,450.000	102,000	934 000	181.000	153,000
" " afloat	512.000	.....	.....	.....	.....
Indianapolis	76 000	18 000	.....	.....	.....
Kansas City	1.385,000	21,000	28,000	27,000	.....
Milwaukee	396 000	.....	.....	215 000	34,000
" afloat	176,000	.....	120 000	.....	.....
Minneapolis	20 058 000	46 000	526,000	120 000	223,000
Montreal	812 000	7,000	217 000	3 000	52,000
New York	3,265 000	246,000	1,596.000	15,000	133.000
" afloat	232.000	.....	93,000	.....	148,000
Oswego	.....	.....	.....	.....	50.000
Peoria	13.000	279.000	305 000	4.000	1,000
Philadelphia	421,000	660.000	97.000	.....	.....
St. Louis	1,198.000	1,109 000	588,000	3,000	2,000
" afloat	.....	46,000	.....	.....	.....
Toledo	731,000	757,000	79,000	124,000	.....
" afloat	.....	.....	.....	.....	.....
Toronto	25,000	.....	76.000	.....	27,000
On Canal	.....	8,000	12,000	.....	.....
On Lakes	.....	.....	.....	.....	.....
On Mississippi	.....	140,000	1.000	.....	.....
Grand Total	64.089.000	13.036,000	7.001,000	1,518 000	1,927,000
Corresponding date 1895	78,761,000	13,676.000	6.586 000	318,000	1,417,000

MARINE RECORD

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CLEVELAND, O., MARCH 5, 1896.

VESSEL men will not omit any effort to defeat the Detroit bridge bill in the Senate, notwithstanding the favorable report of the Committee on Commerce. The advocates of the bridge do not seem content to let the question rest on its merits, but are trying to rush it through when nobody is looking. The chances are that the project will never succeed, as the House stands as ready as ever to kill it.

THE Canadian government is setting this country a noble example in encouraging the establishment of a new transatlantic fleet, to ply between the St. Lawrence River and Great Britain, with Halifax as the American terminus during the winter months. Comparatively poor as is the Dominion, she grants $750,000 per year for a line of four steamers of 8,500 tons and 20 knots ordinary speed. The British government will add $350,000 per year to this. Of course, subsidies are not to be considered by this government; but if the same spirit of encouragement to commerce was shown, the American flag would be less of a rarity on the high seas.

THE Maritime Board of the Cleveland Chamber of Commerce is already showing its value to and influence upon the varied interests of the Great Lakes. The fact that so much tonnage is owned and controlled in Cleveland gives the body a more than local scope in many matters. At the same time, when treating on questions to be decided in a locality foreign to the Great Lakes, resolutions and recommendations of the Cleveland Maritime Board are likely to be looked upon as expressions of local and sectional views. This would be incorrect and unjust, it is true; but things must be seen as they are, and not as we would have them. In view of this, therefore, THE RECORD suggests that commercial bodies at all lake ports where such organizations exist should organize such a board, to be composed of the ship, elevator and dock owning, and relative interests, to pass upon questions of both local and general scope. The natural result of this would be the formation of a great joint body to be called the Great Lakes Chamber of Shipping, or some such name. An organization of this sort would wield an almost unlimited influence, as representative of all classes of lake interests. Legislation would be more easily obtained, and a better understanding eventually brought about between branches of lake trade which now conflict to some extent. A more uniform treatment of drainage and sewage problems could be secured, and one port would be less likely to accomplish anything which would work to the detriment of other ports.

PRICES FOR SHIPBUILDING ON THE CLYDE AND THE LAKES.

As reflecting on the shipbuilding industry in the lake district of America and on the cheapness of freights, some details are here given as to the contracts for a fleet of cargo carriers recently placed. There are fourteen vessels in all—eight steamers and six sailing vessels—and all for one concern. The aggregate carrying capacity of the fourteen vessels is 56,000 tons, and they are to be built for a price equal to £10 per ton deadweight carrying capacity. This pays the builders handsomely, for it will be noted that only eight vessels are to have propelling machinery, each of the eight steamers having engines of 2,000 i.h.p., so that the combined power is only 16,000 i.h.p. Now, on the Clyde last year, work was placed at £9 per ton deadweight for moderate powered steamers alone, and, moreover, the lake boats are but shells. The idea is that every steamer will tow one of the ships unless the wind is favorable and strong enough to give a good speed with fore-and-aft sails on three masts. The dimensions of steamers vary according to the builders, of whom there are six; but, for the most part, they are 418 ft. long, 45½ ft. beam, and 28 ft. deep. The power mentioned is rather more than has hitherto been usual on the lakes; and the intention of the owners is to insure that the season's work of the vessels will not be less than the transport of 1,200,000 tons on Lake Superior. The freight is expected to drop by reason of this addition to tonnage to 4s 7d instead of 5s 6d a ton. At this rate the year's work will be equal to a revenue of over £130,000, and, be it noted, the working expenses, by reason of the towage arrangements, will be lower than with ordinary conditions.—The Steamship, London.

Even the ink with which this remarkable statement was printed, bears the unmistakable aroma of oil of mustard. But a word or two as to these wondrous figures. The British have fallen so into the habit of regarding everything American as of such a flimsy and bogus character that wilful misrepresentation can hardly be charged. Self-sufficient ignorance seems a much more suitable term. The Steamship should be informed that the carrying capacity of 4,000 tons is estimated on Lake Superior draft, which is at present about 14½ feet, even through the deeper canal, as the water at points in the Sault passages is limited to this depth. These vessels will carry on 20 feet draft about 7,000 tons, and as the cost of British ships is usually figured, we believe, on a draft of about 25 feet, the comparison is absurd. Computing at the price assumed by The Steamship, the price of the vessels is about £6 per ton on 20 feet draft, or only two-thirds of the price on the Clyde last year, a time of great depression in British as well as American shipbuilding circles. Note the unfairness in choosing a time for comparison. The prices for shipbuilding on the lakes range from 15 to 20 per cent higher than they did a year ago.

The statement that lake boats are but shells is inexcusably misleading; we say inexcusably, because The Steamship has an opportunity to know that many ships of this grade have been classed by some of the best societies on the globe, including the Record of American and Foreign Shipping, the United States Standard Register, and the Bureau Veritas, and a large number of British underwriters rely sufficiently upon their classification to insure their craft at rates equal to and lower than the premiums they charge on salt water craft. This ought to be convincing, but The Steamship has had opportunities of seeing detailed plans of lake shipping and of knowing, therefore, that if the requirements of lake trade favor the single cargo compartment construction, which The Steamship chooses to call shell-like, the absence of bulkheads is fully compensated by putting in an extra amount of deckbeams, intercostals, stanchions and other stiffening and strengthening material. The American methods of construction are fully equal to those in vogue at British yards; and the fact is notorious that the tramp steamers quoted in the above article at £9 per ton are of the class which many lake shipbuilders have seen and pronounced disgraceful looking hulks that equal neither in strength nor finish the work of American shipyards.

Now The Steamshipand its British contemporaries and readers may read with disgust and disbelief that American yards are turning out work at lower prices than those made last year on the Clyde. But it will be noted that the RECORD has made no such statement. It has long been contended, and with truth, that American shipbuilders turn out a better class of work for the same money than do the British; but of course this will not be admitted on the other side. To tell the truth, however, and thus insure belief in other details, it must be said that the prices of these steamers will average more than 25 per cent above the figures on which that journal has been working. And now will not The Steamship or some of its better posted contemporaries, give some honest figures which will prove of some value in comparisons—using this year's prices on the Clyde, and estimating the cost per ton of carying capacity according to what the ship will actually carry, rather than upon what they will be able to move with a depth of water which reduces their real capacity by 40 per cent.

OBITUARY.

CAPT. GEORGE SIMPSON.

Capt. George Simpson died at his residence in Owen Sound on Saturday, Feb. 15, suddenly of heart disease, Captain George Simpson was born at Belleville, and in 1880 came to Owen Sound. In 1859 he was married to Miss Manley, Oakville, the fruit of the union being three children, all of whom are living, namely. Richard Simpson, Water street; Mrs. Jas. Oatt and Fred Simpson, Hartney, Manitoba. The brothers and sisters of deceased are Captain John Simpson, Owen Sound; Captain Melanchton Simpson, Hamilton; Rev. Chas. Simpson, Cooksville; Rev. Jas. Simpson, Thornbury; D. P. Simpson, (formerly foreman of Collingwood dry-dock) Eureka, Cal.; Mrs. Morley, Buffalo; and Mrs. Way, Tweed. Deceased was a sailor for upwards of 36 years. during which time he assisted his brother, Captain John Simpson in building vessels.

LATER APPOINTMENTS.

Notice of the following appointments came in Wednesday in addition to those found on another page:

STEAMER.	MASTER.	ENGINEER.
Atlanta	Nicholson, Wm.	Jerome. W. H.
Blanchard, B. W.	Meikleham, Thos.	Tilley, E. W.
Balize (tug)	Carney, Thos.	Scott, Chas.
Chicago	Witty, George	Weidert, Felix
City of Ludinglon	Carns, Ed.	Callan, John
Racine	Wilson, James	Parks, J. A.
Favorite	Millen, P. L.	Simmons, G. L.
Greyhound	Baker, Bert	McMillan, D. J.
Indiana	Gallagher, A.	Flint, Ray
Iron Age	Mahon, A. J.	Phelan, John
Iron Chief	Irvine, W. A.	Cobo, August
Iron Duke	Miner, N. L.	Howard, Chris.
Iron King	Miller, Wm. F.	Hegemer, John
Muskegon	Munger, ——	Dorey, T.
Onaping	Tobin, J. E.	Maitland, Neil
Oades, John	Lemay, T.	Zeh, Jacob
Parker, A. A.	Hutton, J. T.	Falconer, James
Pridgeon, John	Sherwood, D. N.	Mogan, John
Saginaw (tug)	Hayes, Thos.	Clancey, M.
Virginia	Stines, H. E.	Roth, J. P.
Wales	Hagan, Thos.	Cronk, L.

SCHOONER.	MASTER.
Iron City	Hurley, John
Iron Cliff	Fitzsimmons, T.
Iron State	Carter, W. W.
Parker, B. W.	Loher, Edward
Red Wing	Anderson, John
Reid, Isabel	Johnson, Peter
San Diego	Mason, John
Saveland	Morey, Henry
Stewart, A.	Destrois, John
Wilson, Anabel	Nathan, Daniel
Winslow, H. C.	Larson, A.
Zapotec	Thomson, Peter

IN GENERAL.

During the season of 1895, Oswego shipped 484,559 gross tons of coal, and Fair Haven, 55,348 gross tons. Most of it went to Canada.

The Senate has passed a bill providing for the increase of the navy by enlisting 1,000 men; also for calling out the naval reserve and the charter of transports if necessary.

At Detroit, Tuesday, Judge Swan decided the case of T. E. Churchill vs. the steamer Wheeler and barge Ashland by giving a degree for $2,121.71 and interest from date of commissioner's report in favor of the libellant.

Lieut-Col. Lydecker estimates the cost of straightening the river at Saugatuck to be $172,645. It is opinion that provision of means for keeping the sand from drifting back into the channel would increase the cost to $200,000.

Senator McMillan has introduced a bill changing the rules in the awarding of medals for saving life, making it possible for heroism to be recognized without technical difficulties arising. As a result Capt. Daniel Linn, who went out with a volunteer crew to the rescue of the schooner William Shupe in May, 1894, will probably get a medal. All the volunteers except Capt. Linn were drowned.

Indications are that the new Toledo dock lines will be established from the mouth of Swan Creek to Cherry street bridge. The line will run straight from the creek across Goose Point, connecting with the river. At Toley's the line will be about 160 feet from the present wharf, and at J. N. Dewey & Co.'s and Howells it will be about 140 feet out, and at the foot of Madison street 135 feet. From there to the bridge there will be a gradual incline shoreward.

SHIP BUILDING AND REPAIRS.

SOME SMALL TONNAGE.

A number of small craft are in course of erection this winter, often at ports where little is said about their construction. Capt. W. H. Singer, of Duluth, has placed an order with E. W. Heath, of Benton Harbor, for a $13,000 tug to measure 80x19x11 feet.

Capt. Peterson, formerly of the tug Messenger, is building at Escanaba a little steamer to be used as a passenger boat on Little Bay de Noque. She is only 40 feet long and 7 feet 10 inches beam and is building for Ewing Bros., of Escanaba. She will cost $1.000.

The new Union line steamer building at the Union Dry-dock, Buffalo, is about half in frame most of her bottom is completed. The oil tank barge just awarded to the Union Dry-dock Co. will cost about $130,000. Her machinery outfit will include two heavy pumps, one for her oil cargo, and one for her water ballast.

The machinery for W. J. Connors' yacht Enquirer, has arrived at the Union yard, and she will be launched before the middle of the month. She is to be finished in bird's-eye maple and quartered oak.

NEW CANADIAN TONNAGE.

Special Correspondence to The Marine Record.

KINGSTON, ONT., March 2, 1896.

The Montreal Transportation Co.'s barge, which is to tow behind the new Tyne-built steamer Rosemont, is rapidly nearing completion. The workmen are taking advantage of the warm weather to push her along.

The new schooner Hiram Calvin is not far from completion. She will be a handsome addition to the Calvin fleet.

The propeller Myles will be ready for sea about April 1. About fifty men have been at work on her all winter. Her hull is almost entirely new. She will run between Duluth and Montreal.

Work is about completed on the steamer Hero, lying in Davis' dry-dock. Nearly her whole bottom has been replanked, and new guards have been put on, as well as bustles, which make her more steady. Inside she has received general repairs, and her whole hull is recalked.

The R. &. O. steamer Corsican is receiving new paddle wheels. A new guard will be put on all the way around her, and a part of the after bulwarks will be renewed. The dining room and kitchen have been thoroughly renovated, with entire new floors. In addition, she is receiving the usual joiner work and painting and overhauling. The steamer Spartan is receiving a little attention; part new guard is being put on, and the dining room is being remodeled. The shaft of the Hamilton is being lowered seven inches, to get the screw further down in the water

Work on the steamer Jack is progressing. She has been given double smoke-stacks. The report that the government will use her as a ram in case of war is not confirmed, although she has shown great ability in that line.

The steamer J. G. Nichols, Capt. Gus Hinckley, has had double ribs put in her, and has had her main deck and bulwarks raised abont 12 inches.

Capt. J. Savage is putting a new maintopmast in the schooner Annie Minnes. She is being thoroughly overhauled, besides.

WORK ON BIG WOODEN SHIPS.

Special Correspondence to The Marine Record.

WEST BAY CITY, March 2.

Capt. James Davidson is now enjoying a vacation trip through California and other points of the West, and will be absent about a month; but work at his shipyard is moving along at a great gait. This work includes two new steamships, one an exact duplicate of the Rappahannock and Sacramento, 335x43x16 feet, the engines built by the Frontier Iron Works, Detroit, being 29, 32, and 54 x 42 inches. The two boilers, 12¼ x 12 feet, are being built by Wickes Bros., of Saginaw, and fitted with the Howden hot draft. This steamer is about half ceiled, and will be ready for sea by June 1. The other steamer, 285 x 44 x 22 feet, will also have triple-expansion engine and one Scotch type boiler, equipped with hot draft. Both steamers will be modern in every way, and equipped with steam steering gear, steam windlasses, and capstans, stockless anchors, deck hoists, and electric light plants.

There are building at this yard three schooners, exact duplicates, 300 x 45 22 feet, with steel keelsons, steel arches and chords, and diagonal straps. The schooners are fine models, with well rounded sterns, and will carry 3,000 gross tons on 14 feet 4 inches draft, or 3,500 gross tons on 16 feet draft. They will carry four spars, with canvas, and will each be equipped with a large pony boiler, steam windlass and capstan, stockless anchors, steam deck hoist, and steam pump and siphons. One of these schooners is entirely completed, except finishing planking, and the others are not very far behind. They will be launched all ready for sea on the very first opening of navigation.

GENERAL REPAIR WORK.

CHICAGO.—At Miller Bros.' shipyard the steamer Australasia is in dock for re-calking her butts and repairs to her stern bearing. She will also receive part new rail, new dining room floor, new partition abaft the engine room; new rooms for firemen and deck hands, new tow chocks forward, and two new ash chutes. The tug Welcome is in dock for re-calking and re-ironing and repairs to her stern bearings, and the schooner George W. Naghtin is in for some bottom calking. She also received a new mizzenmast. W.

PORT HURON.—The schooner Pandora, of Sarnia, is receiving a big overhauling. She will have new rail stanchions and covering-board on the starboard side and will be docked and calked from stem to stern.

The Monarch and United Empire are receiving an entire overhauling at Sarnia and being put in readiness for painting.

The fishing tug Dispatch is having her boiler entirely overhauled.

Machinists are at work getting the steamer Britannic's engine in shape for spring. The ship carpenters have had to stop work until she can be put in the dock. This will be done as soon as the river opens. It is still full of ice up to the lake.

The Colorado is receiving extensive repairs. She will come out in first-class condition.

Work on the new Kittie Haight is being pushed. The hull is 44 inches longer than the old, and her speed will be increased accordingly.

The Thomas Cahoon will be entirely rebuilt at the Jenks Shipbuilding Co.'s yard. E. J. K.

SAULT STE. MARIE.—Dunbar & Sullivan are building another steel scow this winter, the second of the kind built here. It measures 88 x 25 x 11 feet and has four pockets, with a joint capacity of 220 yards. It has eight water-tight compartments, of which four must fill before she will sink. She will have a square end at the bow, instead of the round bow of the scow formerly built by this firm. The scow will cost about $12,000, and will be ready by the opening of navigation.

The Faugh-a-Ballagh has ended her career as a dredge, and is being remodeled and refitted at the D. & S. yard. She will come out in the spring as the largest and strongest floating derrick on the lakes, with a 60-foot sheer legs capable of lifting forty tons. She will be used for picking cranes from the dredges, shipping, anchors, and doing all sorts of utility and minor wrecking work. Nearly 100 men are employed at Dunbar & Sullivan's yard.

DETROIT.—The Shenango No. 2 left the Detroit dry-dock Friday after receiving one solid and two sectional wheels, all furnished by S F. Hodge & Co. She also had a little minor repair work done. The Selwyn Eddy entered the dock Friday for general repairs. The Fayette Brown, which is being lengthened, has her plating on.

The Detroit boat works are building a new 35-foot steam yacht. The new yacht Azelia, which this concern built last winter, is being altered from the original plans, the Detroit Boat Works doing the job. Her cabins are being remodeled, extra staterooms being provided. She will also have a new companionway and sky-light, and new upholstery. The boiler is receiving some alterations. J. K. C.

STURGEON BAY.—The schooner Harry Johnson will receive a complete new deck before spring.

If the cost of "bustling" the steamer Hurd, now in progress, proves a profitable investment, the Fountain City is to be treated in like manner. The false sides will increase the Hurd's beam from 29½ to 35 feet, and will, it is thought, increase her carrying capacity from 600,000 to 750,000 feet of lumber.

The false sides begin just above the bilges, the outside frames being strengthened by two longitudinal chords, made from portions of her big wooden arches recently discarded. These chords are placed between the sides proper and the false side beams, one near the top and the other at the beam knees. The outside frames and chords are bolted to the old frames and ceiling, the whole forming a neat strong truss, all out of sight.

In light trim her false sides on the quarters will be under water about two feet. Her house forward has been remodelled and made smaller by six feet and moved ahead six feet, and the texas shortened up 14 feet. By this change another hatch has been added, making four in all. Kentucky oak is being used entirely in her reconstruction. She will have new rail 6x18 inches all the way around. When completed, she will have a fine, clear run, which will add much to her appearance.

The schooner Evalina is having her cabin remodeled and placed on deck. Her quarters will be raised to the height of the cabin, the sides of which will bome flush with the rail. Her carrying capacity will thus be increased from 350,000 to 360,000 feet of lumber.

The Ann Arbor No. 2 bent her shaft and has gone into dry-dock for the third time this winter.

CONSTRUCTION AND REPAIR NOTES.

A contract has just been closed by the Marine Steamship with the Delaware River Shipbuilding Co., (Roach) at Chester, Pa., for building a 3,500 ton steel screw passenger steamer of the most improved type, 315 feet long over all by 46 feet beam, to be handsomely fitted up, with 110 staterooms. She will be driven by a triple expansion engine with cylinders 28, 46 and 73 inches in diameter, and four scotch-type boilers. She is expected to make 18 knots per hour, and will cost $300,000. She is to be finished by January, 1897, and will run between New York and Portland, Me. There are now three big steamships, two ferry boats, and a yacht contracted for and under way at this yard.

The steamer Mohawk, which was to have been launched at Roach's shipyard last Saturday, stuck on the ways and refused to go into the water. Among those present were Frank E. Kirby and Mr. and Mrs. Gilbert McMillan, of the Detroit Dry-Dock Co.

The steamer Raleigh is getting $10,000 worth of repairs at Milwaukee. The City of Louisville is in the sectional dry-dock there for hull changes.

The tug Menominee River's $3,000 rebuild at Menominee is almost finished.

Hingston & Woods are rebuilding their tug Campbell at the Sault.

The steamer J. C. Ford is receiving new bulwarks and rail at her stern in Cleveland harbor.

Steam hoist geer which was formerly on the Cavalier has been placed aboard the J. I. Case at Toledo. The Case goes into the timber trade.

Capt. Edward Mullen, who has spent about $6,000 in trying to release the schooner Commerce, ashore at Seul Choix Bay, will make another attempt to get her. He values her at $10,000. Her bows are pointed lakeward and she lies in two feet of water.

F. W. Wheeler & Co. will accept the F. & P. M. No. 1 in part payment for the new car ferry. The Clover Leaf is said to be negotiating for the No. 5, to put in their Lake Erie line.

The tug Brockway is receiving extensive repairs at Port Huron.

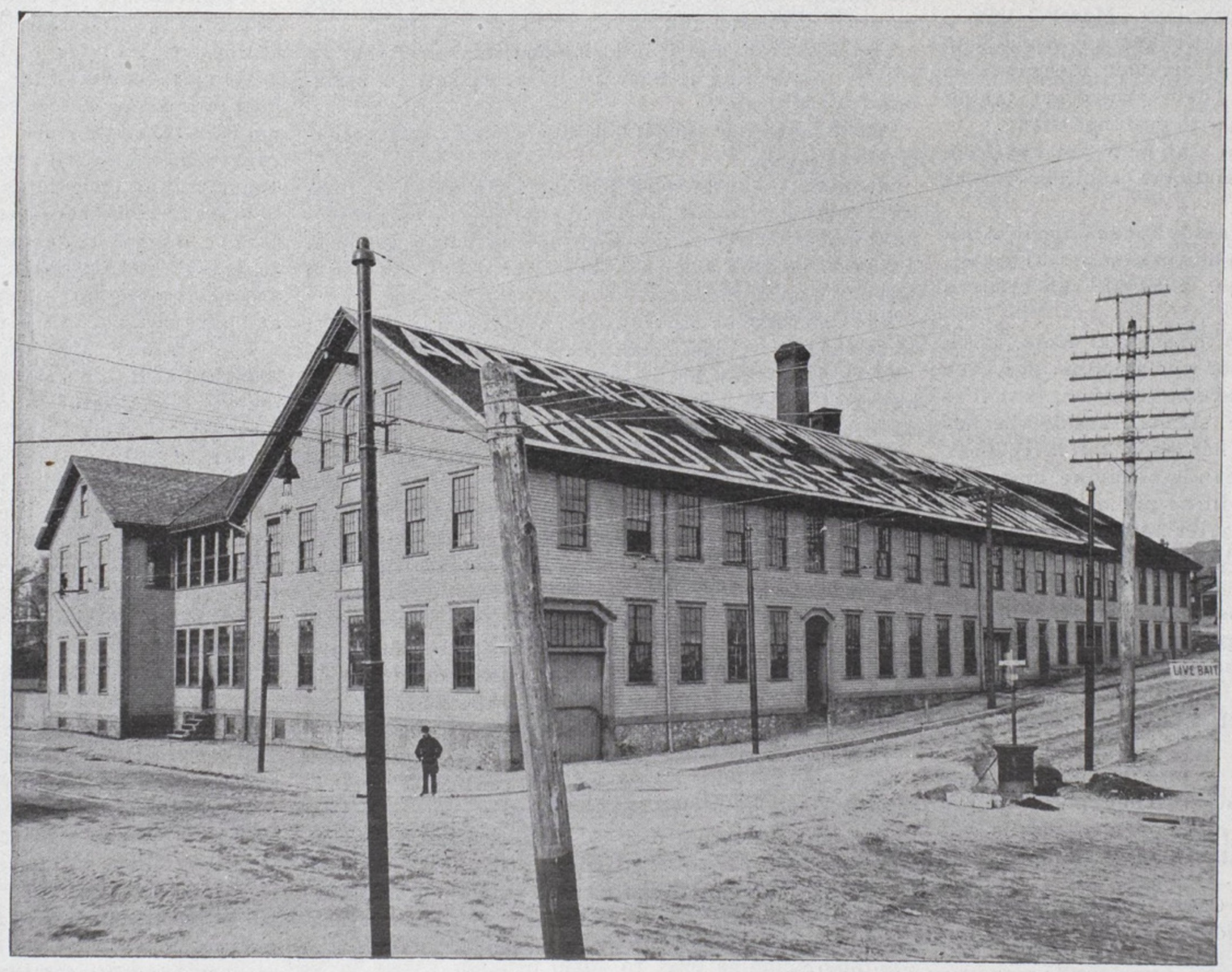
The double launch of the City of Bangor and L. C. Waldo at Wheeler & Co.'s shipyard, which was announced for last Saturday, had to be postponed.

A PILOT HOUSE CALENDAR.

Frank Morrison, the well-known manufacturer and adjuster of compasses and other nautical instruments, has just issued a new calendar for the season of 1896, a copy of which should find a place in the pilot house of every boat on the lakes. It contains illustrations of his specially designed compass card, binnacles, and lately patented automatic engine-room telegraph, with tables showing corrected compass courses on all the lakes, and a table of sailing distances. Mr. Morrison stands at the head of his profession as an adjuster, long apprenticeship and careful study of the manufacture of compasses having familiarized him with every part. He has invented and patented a number of improved devices, and there is no one on the lakes who can be compared with him in the line of skillful work.

AMERICAN SHIP WINDLASS CO.'S PLANT.

A noteworthy illustration of what the combination of brains, enterprise and merit will accomplish, says the Providence, R. I., Journal, is shown in the career of the American Ship Windlass Co., located at the corner of Waterman and East River streets. This great industrial plant had its inception in 1857. In 1860 several gentlemen who were then connected with the Hope Iron Works, of Providence, bought all of the patents and patterns owned and controled by James Emerson, then acting as the agent of the Emerson Ship Windlass Company, on the occasion of their failure at that time. These gentlemen and others then organized under the name of the American Ship Windlass Co., the Hope Iron Works still continuing the manufacture of these windlasses under royalty until 1875, when the company secured a small building at their present location. The plant now embraces over two acres of ground, and the equipment includes all the latest and most modern machinery known in their business, the motive power being furnished by a handsome modern-type Corliss engine and a suitable battery of boilers, employment being given to nearly 150 hands; the entire plant is lighted by electricity, besides which there is an immense electric overhead crane, capable of moving 20 tons, traveling all over the erecting shop. Their "Providence" steam capstan windlass is widely known in the marine world. The company also manufactures the Shaw & Spiegle patent automatic steam towing machine, which has revolutionized the art of towing since its introduction, doing away entirely with the old fashioned manilla hawsers, and which really represents in its invention the only improvement in the art of towing in the last 100 years. It seems as though if there is a new invention in the line of windlasses, capstans or towing machines, that the American Ship Windlass Co. are the first to secure the same. As an evidence it is only necessary to say that fully seven-eighths the vessels on the Atlantic and Pacific coasts, as well as many on the Great Lakes, are equipped with their machines. The officers of the company are: president, Henry C. Cranston; treasurer, Frederick Metcalf; and Frank S. Manton, agent and manager. Mr. Manton is an experienced, practical man himself, having suggested and devised many of the improvements now in use on their various machines.



PLANT OF AMERICAN SHIP WINDLASS CO., PROVIDENCE. R. I.

BAKER'S SUBMARINE BOAT.

Of all sub-marine boats the Baker is at present probably the farthest under water, says the Detroit Free Press, for she has been deliberately sent to the bottom of Lake Michigan. The history of this unfortunate boat is almost a tragedy, for its failure probably caused, and certainly hastened, the death of its inventor. A Chicago man, Mr. Baker, had little practical knowledge of navigation, but in putting his invention into shape he was fortunate in securing the co-operation of Fred Ballin, of this city, to whom all the details of construction and equipment were intrusted. The boat was constructed at the Detroit Boat Works, and the inventor did not see it until after its completion. It did its work with a fair degree of success, but an accident prevented the demonstration of its capabilities at the most critical time. An official of the navy came here to witness the test. On the first day of his visit it rained and stormed, making a proper test impossible. While changing its batteries that night for a test to be made the day following, an explosion occurred which wrecked its interior and the official returned to Washington with a very poor opinion of the boat. All efforts to secure another test were unavailing and the boat was taken to Chicago. The inventor went to Washington to urge another test but without success. Not being in good health the worry and anxiety caused by the efforts to bring the boat into notice, and the depression caused by the failure so worked that he died and left the boat still untested. His son, finding the expense of maintaining it greater that he cared to stand, took the machinery out, and had the dismantled hull towed into deep water and sunk. The venture cost Mr. Baker $12,000, and probably a little more. Mr. Ballin believes the boat one of the most practical ever invented and ascribes its failure to no fault in principle. He believes that for $15,000 he can construct a boat on the Baker idea that will prove a success in every way.

WHAT LOAD ICE WILL BEAR.

The army rules are that two-inch ice will sustain a man or properly spaced infantry; 4 in. ice will carry a man on horseback or cavalry, or light guns; 6 in. ice, heavy field guns, such as 80 pounders; 8 in. ice, a battery of artillery, with carriages and horses, but not over 1,000 lbs. per square foot on sledges; and 10 in. ice sustains an army or an innumerable multitude. On 15 in. ice, railroad tracks are often laid and operated for months, and 2 ft. thick ice withstood the impact of a loaded passenger car, after a 60 ft. fall (or, perhaps, 1,500 foot-tons), but broke under that of the locomotive and tender (or, perhaps, 3,000 foot-tons.) Trautwine gives the crushing strength of firm ice as 167-250 lbs. per square inch. Col. Ludlow, in his experiments in 1881, on 6-12 in. cubes, found 292-889 lbs. for pure hard ice, and 222-820 lbs. for inferior grades, and on the Delaware river, 700 lbs. for clear ice and 400 lbs. or less for the ice near the mouth, where it is more or less disintegrated by the action of salt water, etc. Experiments of Gzowski gave 208 lbs.; those of others, 310-320 lbs. The tensile strength was found by German experiments to be 142-223 lbs. per square inch. The shearing strength has been given as 75-119 lbs. per square inch. The average specific gravity of ice is 0.92. In freezing water increases in volume from 1-9 to 1-18, or an average of 1-11; when floating, 11-12 is immersed.—Engineering Mechanics.

THE LIBRARY TABLE.

A most interesting publication is Volume 1, No. 1, of the Journal of the Western Society of Engineers. It is published much on the same plan as the Journal of American Society of Naval Engineers, but the papers are of a more general character. The initial number contains a paper on "Dry-Docks of the Great Lakes," which has a historic as well as an engineering value. It is chiefly devoted to a description of the engineering problems involved in the construction of the new South Chicago dry-dock, of which Mr. Powell had charge, and is illustrated with views of the dock in various stages of construction. Other papers are upon the subjects, "Oriental Railways," by Clement F. Street; "New Experimental Data for Flow over a Broad Crest Dam," an especially interesting topic just now, by Thomas T. Johnston and Ernest L. Cooley; a symposium on hydraulic cement; a valuable compilation of data regarding the physics of existing and proposed waterways between the Great Lakes and the Atlantic, illustrated with diagrams and profile supplements. The first number is most pleasing in its character, and bespeaks wide interest in its contents for the year. It will be issued bi-monthly, at a cost of $2 per year.

J. Arthur Gray continues, in the March number of Cassier's Magazine, his paper on "Modern Shipbuilding Tools," illustrated, as in the February issue, by views of a number of comparatively new labor-saving machines for shipyard work. "New Power Developments at Niagara Falls" are well set forth by Orrin E. Dunlap. Prof. John E. Sweet tells about "Some Recent Departures in Piston Construction."

The Trade Press, a bright monthly journal, published in Chicago in the interest of the branch of business indicated by its title, has reached its 231 number, and appears to be flourishing. It is conducted under the able management of Mr. Irving G. McColl, formerly a successful Cleveland daily newspaper man.

THE RECORD has just received from the Information Bureau of the Navy Department the annual edition of The Year's Naval Progress, for the 12 months ending with last June. Its information is entirely from abroad, and the most interesting feature is the account of the China-Japanese war, with a large supplement map of the theater of operations. It is profusely illustrated with views of ordnance, armor plates, stadimeters, positions of finders, and other essentials of modern warfare, in addition to plans and other details concerning typical battleships and gunboats of various European countries.

"Mullins' Boats" is the title of a neatly printed and bound little book, which looks like a novelette, but is really a catalogue of the stock of W. H. Mullins, Salem, Ohio, who manufactures pleasure and ducking boats in manganese, bronze, aluminum and galvanized steel, one of which, recently patented, was illustrated in THE RECORD two weeks ago.

Merchant & Co.'s spanish tiles, star ventilators, etc., are placed before the public in a most attractive manner in "Overhead," a beautifully illustrated brochure issued by that firm, which has headquarters in New York, Philadelphia and Chicago.

Mr. A. J. Russell, of Russell & Watson, dealers in ship's lamps and ranges, has been making a trip around the lakes. He reports business in his lines as quite active.

BRITISH AND FOREIGN INSURANCE COMPANY.

We print without comment the following article which appeared recently in Fairplay, in reference to the British and Foreign Insurance Co.'s affairs. This company carries risks on a large number of the most valuable vessels on the Great Lakes, and the following will no doubt be read with interest by policy holders:

This great company shows an unfavorable result, so far, for last year. The anuual meeting took place on Friday, the 24th January, Mr. Thomas Chilton presiding. The 1894 underwriting account has resulted in a profit of £63,243, leaving, with the interest for 1895, £50,628, and £150,272 brought forward from 1894, £264,-144 to the credit of profit and loss account. The company pays in dividend and bonus 25 per cent. for the year, transferring £25,000 to the reserve fund, which now amounts to £725,000. The company does not owe these great results to the current profits of its underwriting; the returns on its invested funds supply fully half the dividend and addition to reserve. Coming to last year's business we find that the company wrote net premiums amounting to the enormous total of £605,761, but it made settlements against these premiums of no less than £306,216, or over 50 per cent; A company writing a small account may, by reason of the comparatively limited basis of its operations, fall in for a first year's settlement of 50 per cent, and this even in a period not signalized by serious casualties. But when an office like the British and Foreign, with a business extending over a vast area, settles in the first year claims absorbing half its premiums, its experience must be regarded as exceptionally bad. Last year, though not a good one, was by no means a disastrous one, hence the 50 per cent settlement by the company is suggestive of the acceptance of unduly low premiums. If the Company is allowing itself to drift in this direction, sweeping in business over an enormous area at too finely adjusted rates, it would stand to be very hard hit in a specially bad year in casualties—and such years come more or less in cycles. At last Friday's meeting the chairman put the best possible face on matters by saying, in reference to the 1895 premiums and settlements: "We do not want to hide from you that this is not altogether satisfactory."

One of the shareholders subsequently remarked, "I must express the pleasure with which the shareholders have heard the very candid statement of the chairman as to the year 1895, which every business man knows has really been a very bad year. It does great credit to the directors and chairman that they should come and say so, and make no bones about it." But to speak of a "very bad year" as "not altogether satisfactory," is surely making a good many "bones about it." In responding to the vote of thanks to the officers, staff and agents of the company, Mr. White, the New York underwriter (not to be confounded with the famous Mr. Barnes, of New York) used the following remarkable language: "In regard to our business I can only say that the British and Foreign is too large a company to take its guidance implicitly from the market at all times. The company must look to a large extent to its own experience and be prepared to take the responsibility which its leadership entails." Does Mr. White mean by this that sometimes the company should strike, as it were, for an advance in rates of premium? Scarcely; for that kind of attitude would drive clients and their business to other offices. Or does he mean that the company should ignore the "guidance of the market," indulge in rate-cutting, cultivate the "block system," and, generally speaking, run a-muck? If Mr. White does not mean this, what does he mean? He closed his remarks on this head by observing that "the company's underwriters were animated by the desire to mark rates of premium upward when it was shown that the existing ones were unequal to the burden, just as it was their desire to mark them down when this was considered advisable for the protection of the company's customers." In other words, to use an Americanism, the company, in Mr. White's mind, is to do a straddle; it is to put rates up when it can, and to lower them when convenient. But surely it did not require a gentleman from America to tell the underwriters this. There are people who thought that Mr. White was going to get a wigging; but it seems the other way about, and that he has converted his directors into believing what is regarded here as rather a new gospel in underwriting. As in the case of Balak, the cussing did not come off, but instead hh was blessed altogether.

Electric lights will be placed on the Lake Michigan Car Transportation Co.'s dock at Peshtigo, Wis. The lights will be operated by the dynamos on board the tugs Fischer and Perrett, which will lie alongside the dock immediately upon arrival, and connect with the lights, the car barges being cared for by the company's harbor tug.

INTERIOR OF ERECTING SHOP.

WORKS LIKE A CHARM.

The following letter has been received at the office of the King Iron Works, Buffalo:

BRUNSWICK, GA., FEB. 17.

MR. H. G. TROUT, Buffalo, N. Y.

Dear Sir: I would have written you sooner regarding the wheel you shipped us last July for tug Inez, but we had no opportunity to put it on until November. I have now given the wheel a fair trial and I am glad to be able to say that it has improved the boat wonderfully, and we are very much pleased with it. In short, "it works like a charm." Yours truly,

J. S. ROFFE, Engineer.

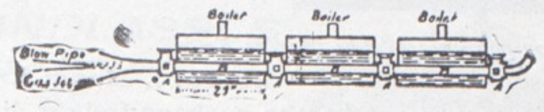
OGDENSBURG, N. Y., Feb. 22, 1896.

H. G. TROUT, ESQ., Buffalo

DEAR SIR: We have used "Trout" wheels for the last six years, and they have given us the greatest satisfaction. You may place our order for a wheel for tug "Rescue." In 1895, Nash Bros. ordered a wheel for this tug. Kindly advise us the dimensions of this wheel, and oblige, DALY BROTHERS.

TESTS OF SERVE RIBBED TUBES.

Some interesting experiments on the relative efficiencies of Serve and plain boiler tubes have recently been made at Barrow, by Mr. Blechynden. The apparatus used is shown diagrammatically in the annexed sketch. It consisted of a set of modeled boilers through which



were placed a Serve tube and a plain tube marked B. The tubes of one boiler were coupled to those of the other as indicated, and Siemen's pyrometers, A. A. A. A. were fitted at the end of each tube. A blowpipe gas jet was then caused to send its flame through one set of the tubes. The pyrometer temperatures were noted, and also the evaporation effected. The boilers were 21 inches long by 7½ inches, diameter, and were clothed with asbestos and cotton wool. The Serve tubes obtained from J. Brown & Co. were 2½ inches in diameter outside, and 2 3-16 inches inside. They have seven ribs, 7-16 inch deep by 3-32 inch mean thickness. The plain tubes were of iron, and were make by A. & J. Stewart, of Clydesdale, Glasgow. These were 2⅜ inches in diameter outside, and 2 inches inside. The mean of several experiments showed that with a temperature of 1,000° Fahr. at the blowpipe end of the boilers and 500° Fahr. at the uptake end, the Serve tube transmitted 6,000 British thermal units per square foot per hour, and the plain tube 4,500 British thermal units per square foot per hour. The area measurements were made on the outside or emission surfaces of the tubes. From these experiments it would seem that the Serve ribs are very efficient heat collectors, when hot gases are passed through the tubes.—London Engineering.

The sole agent in the United States for Serve tubes is Charles W. Whitney, 66 Broadway, New York.

SHIP DIRECTION.

To manage the ship herself means immediate control of engines and of helm. The latest form of engine-room telegraph not only signals by dial indication such orders as "Stop," "Back," etc., which are sufficient for the control of the engines of ships cruising alone, but conveys to the engineers explicit direction as to the number of revolutions of the propelling screws (corresponding approximately to a certain speed) that is necessary if ships are to cruise in fleet formation, and then automatically repeats back its message and the fact that it has been obeyed to the sending station. The helm indicator is even more ingenious. It enables the captain not only to inform the helmsman the exact angle at which the rudder is to be put, but it makes the rudder itself automatically signal back to him the information that it has been put there, so that he can now control both the speed and the movements of the vessel rapidly and with a degree of certainty which has hitherto been unknown. The latest of all these inventions is an electrical device for accurately measuring and instantly indicating a ship's speed, and this is of vital necessity, for such knowledge is a most important factor at every moment of a conflict. It is so arranged that an index before the officer's eyes shows him the speed of his vessel at all times.—Park Benjamin, in Harper's Magazine.

THERE is a lighthouse to every fourteen miles of coast in England, to every thirty-four miles in Ireland, and to every nineteen miles in Scotland.

NEWS AROUND THE LAKES.

BUFFALO.

UNDERWRITERS GETTING READY TO HOLD THEIR MEETING NEXT WEEK—RATES WILL BE HIGHER—CHEAP FUEL.

Special Correspondence to The Marine Record.

BUFFALO, March 3, 1896.

There is movement in the package-freight lines at least and plenty of it, more in fact than may be told now with safety. The sale of the Soo liners Pillsbury and Washburn to Rockefeller has been rumored for some time, and the Soo line people now say that the sale was made early in February. It appears that they are anxious to charter boats in the place of the whalebacks before the sale got out. They made it out, for the Pridgeon and the Gould will take their places.

The lake-line managers are not doing much just now by way of organization beyond the ordinary wood-sawing that is always going on in March. With Manager Evans, of the Anchor Line, gone to Europe to take a long breath there is not much to do, for the three old lines which represent the New York Central, Erie and Pennsylvania railroads on the lakes, are insisting on first place in the discussions, as usual. Shippers are asking for spring rates and of course arguing that they are entitled to reductions, but it looks as though the month would be half gone before a rate would be reached.

The marine underwriters are now promising a meeting next week. It was thought that they might get together this week, but W. J. Sandrock, of Smith, Davis & Co., is in New York, and nothing will be done till he is back. Rates will be higher, but no one seems to be able to say anything further on the situation. The outlook is very different from what it was a year ago. Matters were so far advanced by the first of last March that half of the hulls were placed and every agent was getting over the space between himself and the nearest uninsured boat so fast that you could play cards on his coat tail. There may be something of the sort going on in a week or two, but the agents are not looking for it.

The Buffalo, Rochester & Pittsburg coal people are getting ready to scoop the coal fueling business, as it looks now. They are not only building a steam scow, but they are putting in a lot of soft coal pockets at their dock, and getting into the best shape for work. Vessel men like the looks of it all, for they say it means cheap fuel.

The report that the work on the rebuild of the Erie coal trestle had come to a standstill on account of the lack of timber is denied by the contractors, Gratton & Jennings, who say that they are already driving piles and merely laid off some of the men when the old structure was torn down because they are not all needed on the new work. The Pennsylvania company has abandoned its old trestle and will load at the Erie along with Williams & Peters, and the Delaware & Hudson Co.

Pfohl & Son are adding to their salvage business largely. They lately made a trip to Sand Beach and brought down a lot of the stuff that was jettisoned from the Northern Wave when she went ashore last fall. It is west bound merchandise of every description, from jute to hardware, and is reported not to be of much value.

Canal men are much encouraged over the season's outlook. The opening rate of 3⅞c made last week on wheat to New York is not high, but it is a paying rate, and that is really more than they got all last season. The fleet is nearly all in New York this winter, where it had to go in order to make a few dollars by holding freight or lightering in the harbor, to keep soul and body together. A good many of the boats are already loaded for Buffalo at $1 a ton, which will be a fairly good send-off for the season if they get the opening rate here also.

Supt. Gaskin, of the Union dry-dock, remarked to me the other day, that he had often observed that the bids for work which he had put in for some time were generally just about the average of all that went in, unless it happened that he was the lowest bidder. "We can build in metal as cheap as any of them." he said, "but timber is getting so scarce that it is getting to be no use to bid against the yards that are near the timber supply. I mention this because a notion seems to be spreading about that the Buffalo shipyards were lacking in enterprise because they did not get more new work to do."

It is now expected that the traffic manager, purchasidg agent and marine superintendent of the Northern Steamship Co., will remain here. J. C.

CHICAGO.

MANY SIGNS OF SPRING—THE WASHINGTON DELEGATION RETURNS MUCH ENCOURAGED—MASTERS' AND PILOTS' RANKS SWELLING.

Special Correspondence to The Marine Record.

CHICAGO, March 3.

Capt. W. F. McGregor of Milwaukee, and Captain Ralph Lyon of the steamer Zenith City were in Chicago Tuesday.

Capt. E. L. Ballentine of the steamer City of Paris arrived here Monday from Bay City, with his bride on their wedding tour.

Grain freights are nominal on the basis of 2c on wheat to Buffalo. The steamer George W. Morley and schooner Marvin were chartered this week for corn to Prescott, Ont., at 4c.

Palmer, Cook & Calbick last week chartered the schooner S. M. Stephenson and Fanny Neil for corn to Port Huron at 1¾c.

The firm of Palmer, Cook & Calbick dissolved partnership March 1st. J. A. Calbick & Co., the new firm, comprises Capt. J. A. Calbick and W. H. Wood who was bookkeeper for Palmer, Cook and Calbick, and they will carry on the business of vessel and insurance agents at the old stand at No. 6 Sherman st. Captain J. A. Calbick will also continue his business of wrecking master and surveyor. We wish the new firm much success.

Captain J. S. Dunham arrived home from Washington on Sunday. He is much pleased with the encouragement given him and the other members of the committee representing the associacion for the improvement of Chicago River, by the River and Harbor Committee at the Capitol on Feb. 28th as to the appropriation of $700,000 by the general government for dredging and otherwise improving Chicago River.

The tug Mosher left Chicago early last Thursday morning in company with the steamer Petoskey, bound for St. Joseph, Mich. The Mosher succeeded in breaking up the ice which had grounded on the bar and made a channel for the Petoskey into St. Joseph. The Petoskey left Milwaukee for St. Joseph on this trip on Monday February 17, was compelled to put back to Milwaukee twice in consequence of the ice aud ran into Chicago on Wednesday February 26th.

The Dunham Towing Co. towed the schooners S. M. Stephenson, Maria Martin and Angus Smith to the Santa Fe elevator to load; the schooner Ashland to the Danville elevator; the schooner Edward Smith to the Indiana elevator; the schooner Mosher to the Atlantic elevator; and the steamer City of Berlin to South Chicago.

The Independent Tug line towed the Australasia to Miller Brothers drydock; the steamer Iron Duke to Armour's A. elevator; the Iron King and Iron Queen to Armour's E. elevator; the C. C. Trowbridge from the Illinois Central Slip C. to Miller Bros.' dry dock.

At a meeting of the American Association of Masters and Pilots' Chicago Harbor No. 33, held at their hall last Thursday afternoon, four new members were initiated and nine new applications for membership were presented. The association is making rapid strides in Chicago. WILLIAMS.

PORT HURON.

MAKING ARRANGEMENTS FOR THE SPRING OPENING—THE LINE BOAT AGENCIES—SCHOONER ARTIC IN TROUBLE.

Special Correspondence to The Marine Record.

PORT HURON, March 3, 1896.

Del Alverson is very sick at his residence on Huron street.

The scnooner Arctic has been seized in the Maritime court of Canada at Sarnia for supplies. She will be sold under the hammer. She is laid up in Sarnia Bay.

A Rein, who has been engineer of the Simon Langell for several seasons, may go in one of the Cleveland boats this season.

The Union Dock & Storage company will handle the local business of the Star-Cole, Union Transit, Ogdensburg & Duluth, Lackawanna Transit, Cleveland & Saginaw, Grummond's Mackinac and Ward's Lake Superior Lines.

Captain Charles Holmes is entertaining his father, who arrived on Sunday from England.

The Star line will place the steamer Arundel on the route from Detroit to Port Huron as early as possible. The Cole will come out much earlier than last year. The Toledo and Greyhound will also be placed on the route early in the summer season, when the Cole will probably run to Toledo. E. J. K.

SAULT STE. MARIE.

THE CANAL FORCE ALREADY ON DUTY.—ACTIVE PREPARATIONS FOR NEXT SEASON'S WORK.

Special Correspondence to The Marine Record.

SAULT STE. MARIE, March 3, 1896.

The lock force at the American Canal went to work Monday. The personnel is practically the same as last season. Aside from overhauling the machinery and giving the lock proper a thorough inspection, no repairs will be made.

J. B. Donnelly, who has the contract for putting in the new cribbing and pier work for the ship canal, is making rapid progress with a force of 275 men, and expects to have the work completed to the water's edge by April 1. Considerable delay has resulted from the difficulty of rock dredging. Mr. Donnelly has until May, 1897, to complete his contract, but has been rushing work so as not to interfere with the opening of the canal. As soon as the canal is filled, Hingston & Wood will resume the dredging operations on the approaches to the lock. There is considerable material at each end to be removed.

The dredge Brian Born, which was hauled out for repairs by Dunbar & Sullivan, is about to be launched, and will begin dredging at once. This is the earliest start at dredging ever made at this port.

Capt. R. P. Thompson is expected here from Port Hnron this week to superintend the spring overhauling of his tugs, which he recently purchased from Capt. Jay Hursley.

Capt. Hursley has bought what is left of the steambarge Kershaw, which practically went to pieces at the time the Moonlight and Kent were wrecked last fall.

The steamer Ossifrage will run between here and Mackinac Island in connection with the Minnie M. next season.

It is the intention of the Chandler-Dunbar Water Power Co. to build a large dock on its property to be completed by July 1.

DULUTH AND SUPERIOR.

THE LINES TO INCREASE THEIR EQUIPMENT FOR THE COMING SEASON—NORTHERN LINE ARRANGEMENTS.

Special Correspondence to The Marine Record.

DULUTH, MARCH 2, 1896.

Marine matters have been very quiet here for the past week, even gossip in regard to the opening of navigation being meagre.

Capt. W. H. Singer and B. B. Inman, owners of the Singer and Inman tug lines, have both just returned from a tour of the lake ports. Both will make additions to their line of tugs this season and look for an early opening of navigation.

The Smith-Fee Tug company will start one of their tugs out next Monday on a fishing cruise. The tug which will go out is now at Two Harbors.

The Northern Steamship Co., Eastern Minnesota Railway Co. and Great Northern Elevator Co. will occupy their new offices in the Board of Trade Building on May 1, at which time the operating department of the Northern Steamship Co. will be moved from Buffalo to Duluth. Vice President Farrington says a purchasing agent for the three companies will be located here and all the contracts for supplies of every description will be made by him. The traffic manager and his assistants will still hold forth at Buffalo, but will in all probability be removed to Duluth in the course of a year. Tourists will have a better chance to view Duluth in the future as the North Land and North West will make their long stops at this end of the route instead of at Buffalo as heretofore done.

The Jobbers' Union of Duluth has submitted to President Hill of the Northern Steamship Co., plans for a new dock and commodius waiting rooms, etc., for the passenger boats. The plans also provide for a viaduct over the railroad tracks to the dock.

The Northern Pacific will build a 400 foot dock and construct two immense warehouses thereon. Improvements will also be made to the present dock which until now has been used by the Northwestern Fuel Co. The fuel company has been notified that it must give up the portion of the dock it has been using. The result of this will probably be the construction of a dock by that company. The new warehouses are designed so that the side of the building nearest the railroad tracks, running down the center of the dock, may be raised in sections, or entire, to admit of the handling of freight directly to or from the cars for the entire length of the building. The Northern Pacific expect to deliver 14,000,000 bu. more wheat at Duluth this year than ever before.

The most important sale of lumber which has been announced for this winter was given out this week. The B. B. Richards Lumber Co. has sold to Hurd & Hauenstein of Buffalo 5,000,000 feet of Boards.

There is now considerable likelihood that the steel plant at West Superior will be operated to a considerable extent during the coming summer, and if money enough can be secured before the reorganization takes place it will be kept continuously going.

The work on the extension of the Duluth & Winnipeg ore dock is being pushed to rapid completion and it is thought it will be finished by the opening of navigation.

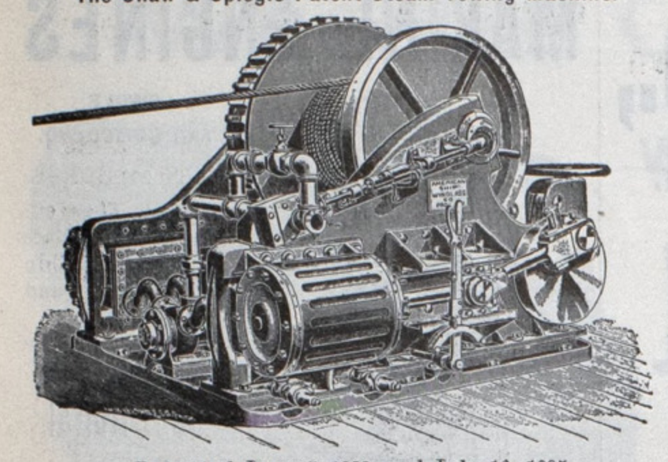
The flour business at the head of the lakes has been dull this winter. There is consolation, however, in the knowledge that stocks in Europe are low, which will undoubtedly result in a rush of orders this spring.

Minnesota will ship over 1,000,000 more tons of ore in 1896 than in 1895, and the producers expect to go better prices than ruled last year. Railroad men and ore managers agree that the shipments of ore from this state this year will approximate 5,000.000 tons, indicating a clean million increase over 1895.

The Duluth & Iron Range Railroad is preparing to handle an immense amount of ore the coming season and in order to get an early start notice has been sent out that ore trains will begin hauling from the stock piles about the first of April. This is several weeks earlier than usual, and by the time the docks at Two Harbors are filled it is expected that navigation will open.

Seattle M. E. B. A., No. 38, elected officers for 1896 as follows: Past President, T. H. Compton; President, R. A. Turner; First Vice President, H. A. Trumbull; Second Vice President, F. B. Casper; Secretary, T. H. Compton; Treasurer, Samuel Cutton; Chaplain, Erskine Thomas; Conductor, James Lathbury; Doorkeeper, E. C. DeLauney.

The Shaw & Spiegle Patent Steam Towing Machine.



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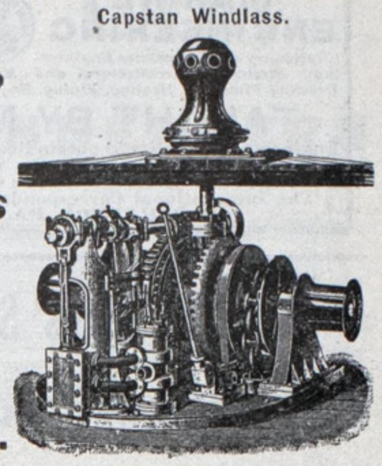

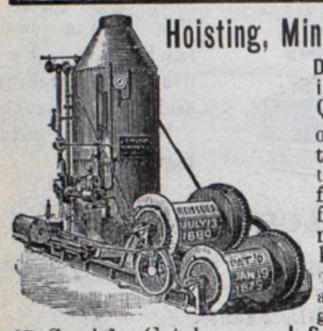

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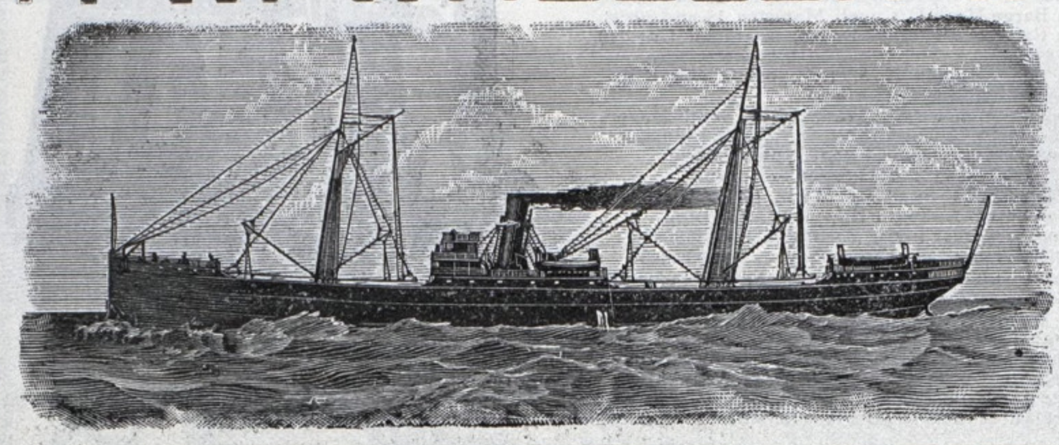

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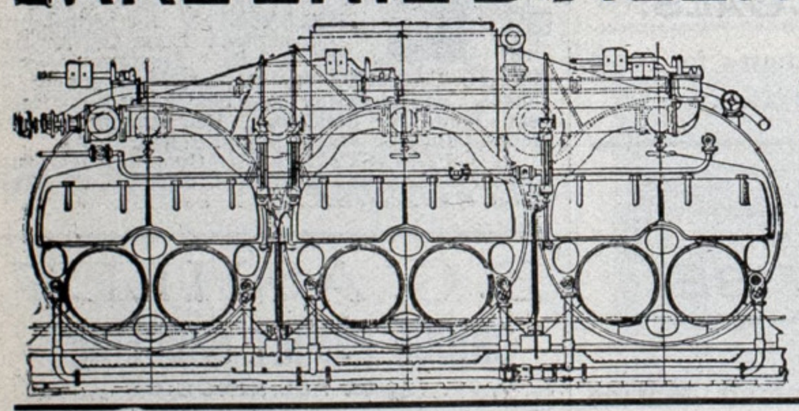

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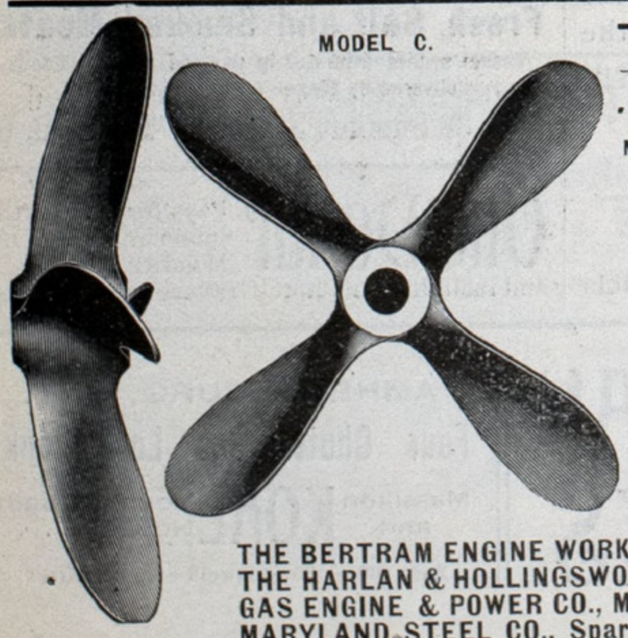

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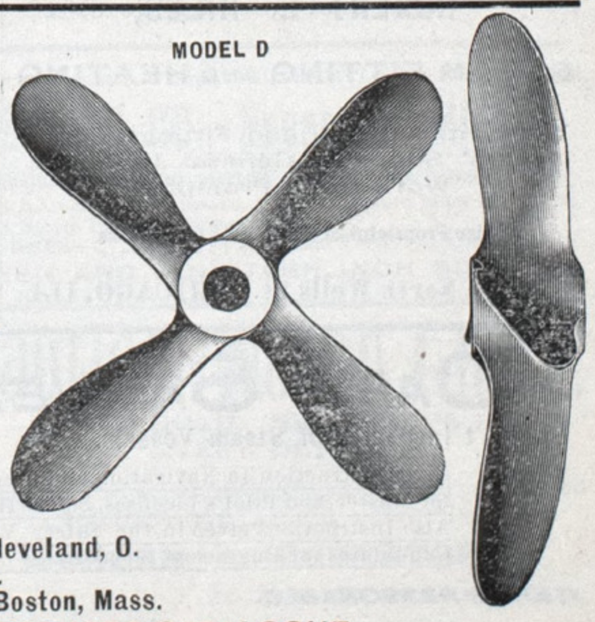

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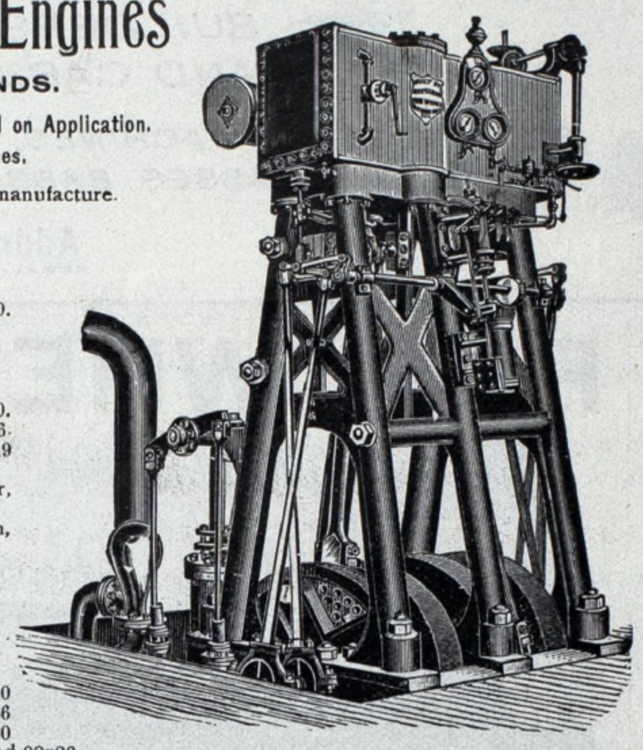

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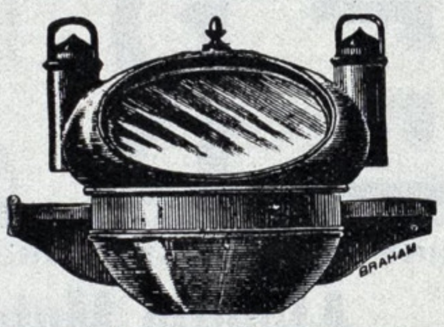

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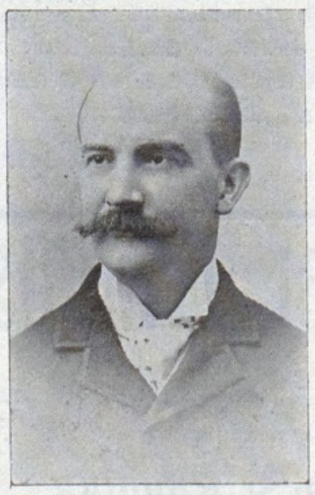

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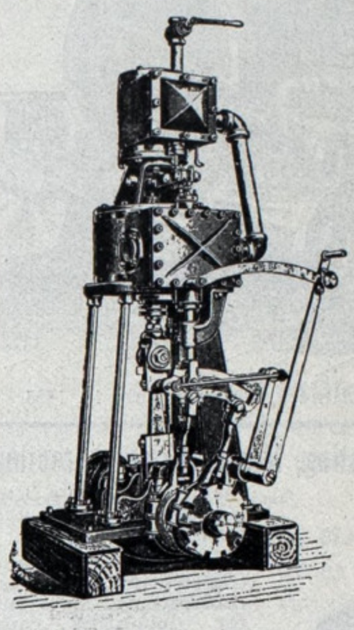

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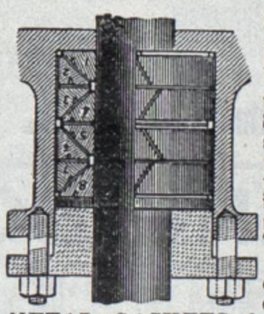

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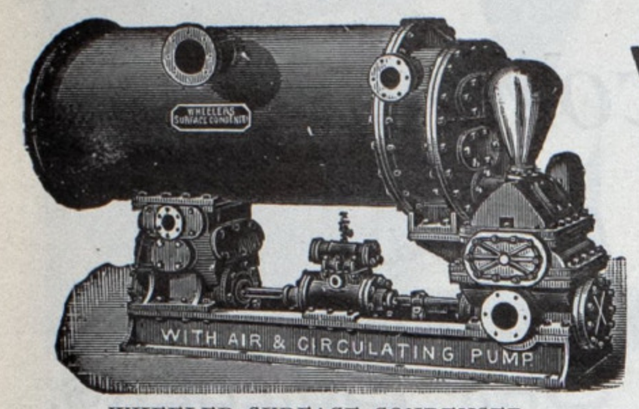

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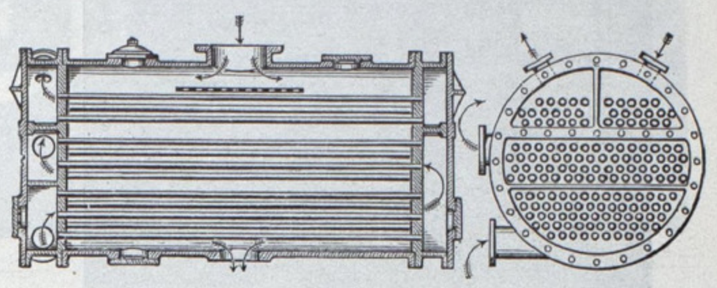

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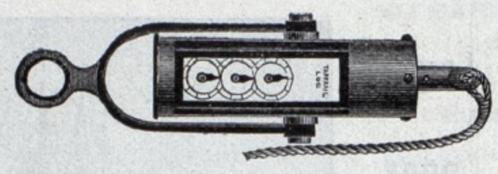

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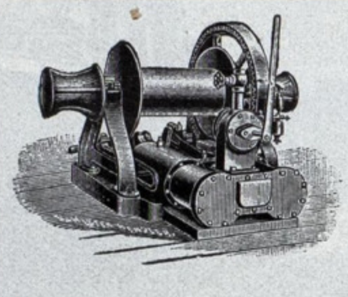

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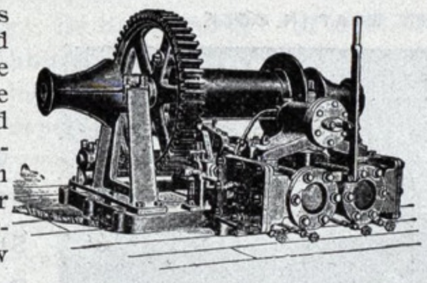

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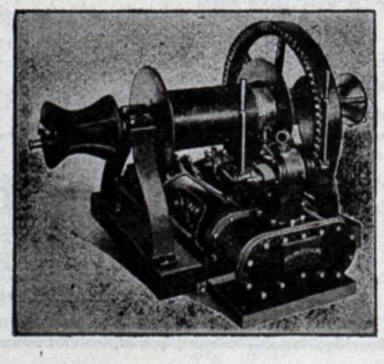

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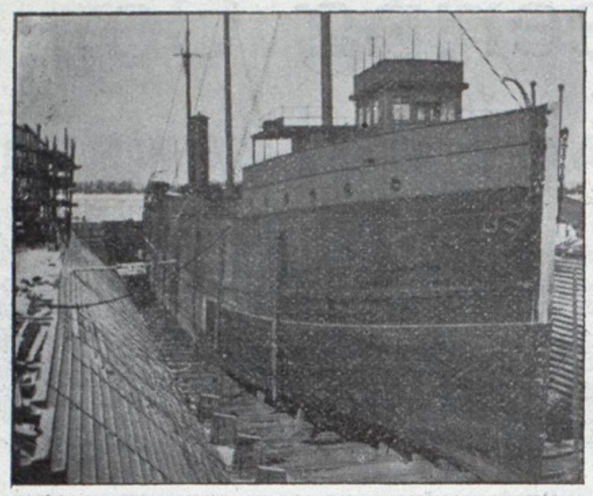

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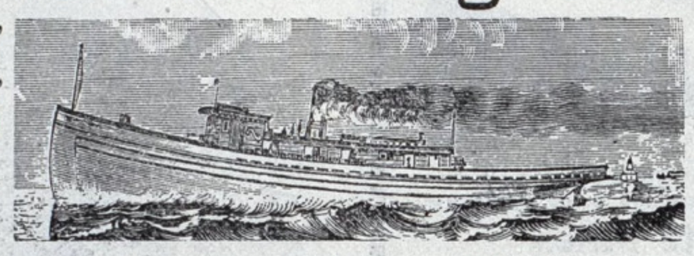

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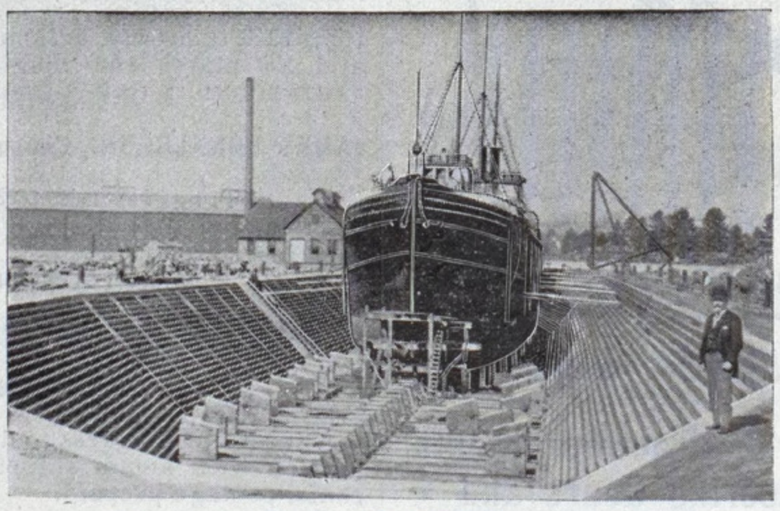

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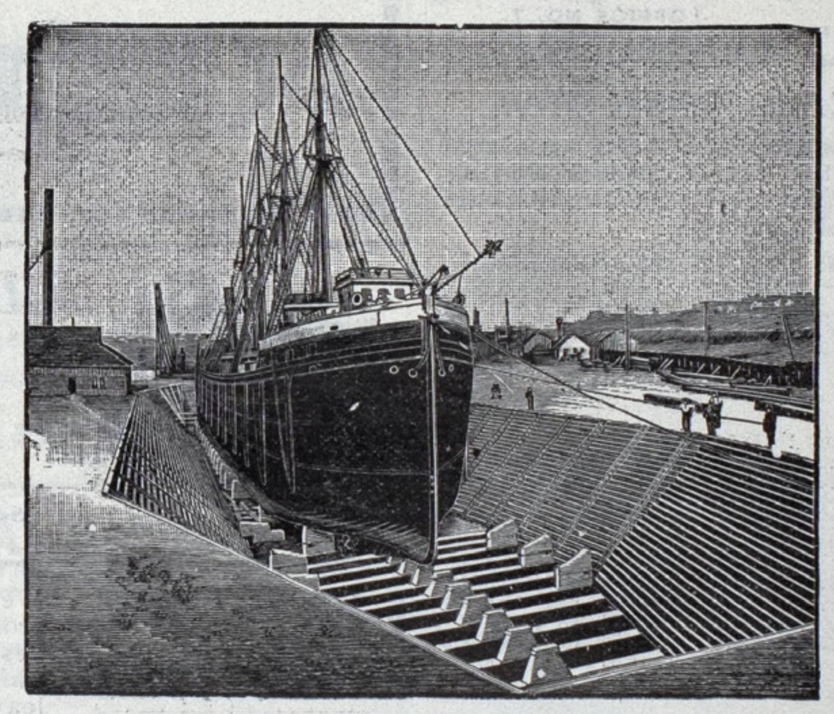

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